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ABSTRACT

The purpose of this report is to outline recommendations for submission to the Illinois Board of Higher Education on the preparation of junior college teachers. Ways in which Illinois' universities could alleviate the shortage and improve the quality of junior college teachers are suggested. The report is organized into two parts, consisting of the preparation of instructors (1) in liberal arts and general education areas, and (2) in technical subjects. Part one recommends upgrading the present master's degree programs, establishing new programs, and designing new doctoral programs specifically for the junior college area. Part two focuses on the preparation of teachers of technical subjects, indicating the need for vocational-technical teachers and recommending a curriculum and programs that would meet this need. (BB)

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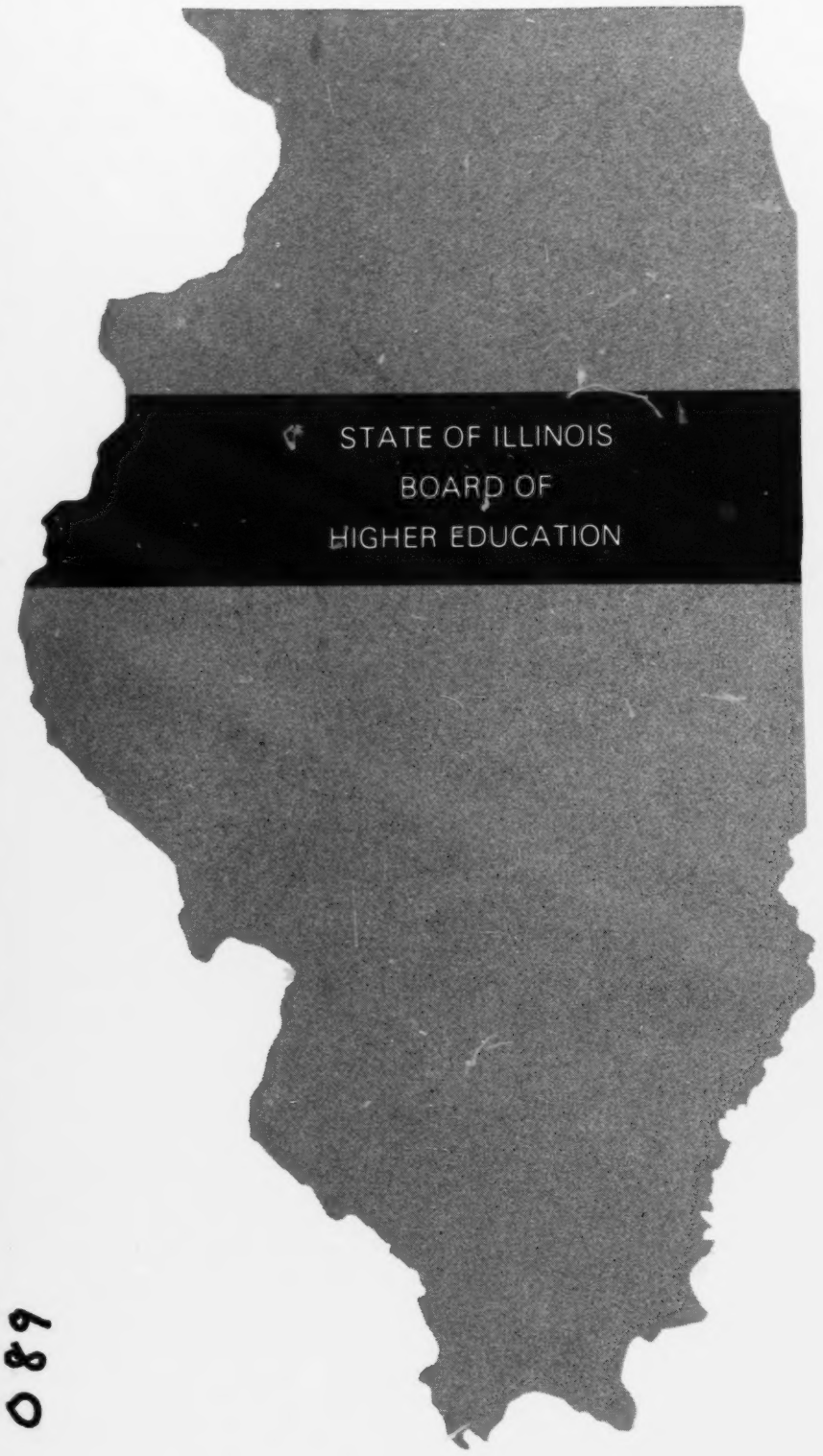

COMMITTEE ON PREPARATION OF JUNIOR COLLEGE TEACHERS

MASTER PLAN
PHASE III

UNIVERSITY OF CALIF.
LOS ANGELES

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COMMITTEE ON PREPARATION OF JUNIOR COLLEGE TEACHERS

A report to the Board of Higher Education for its use in developing "Master Plan—Phase III" for higher education in Illinois. This report is the work of the study committee and is NOT the work of the Board or its staff.

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INTRODUCTION

Purpose of the Report

The Committee's assignment was to prepare a series of recommendations for submission to the Illinois Board of Higher Education on the preparation of junior college teachers. The Committee assumed at the outset that a junior college is a collegiate institution but that its mission does not include the preparation of its own teachers. Therefore, the Committee proceeded on the assumption that its principal purpose was to suggest ways in which Illinois' universities could alleviate the shortage and could improve the quality of college teachers in the state, and this report is addressed primarily to the college teacher preparation institutions in Illinois.

Organization of the Report

This report is organized into two parts, as follows:

Part I: Preparation of Junior College Teachers of Liberal Arts and General Education Subjects

Part II: Preparation of Junior College Teachers of Technical Subjects

There is, of course, no scarcity in the number of problems facing people concerned with the preparation of college teachers. The Committee in preparing this report determined early in its work that the staffing problems of our junior colleges must have first priority. For this reason, this report is devoted primarily to the preparation of faculties for the junior college.

PART I

PREPARATION OF JUNIOR COLLEGE TEACHERS OF LIBERAL ARTS AND GENERAL EDUCATION SUBJECTS

Part I is divided into three sections. The first section is a statistical analysis of the need for junior college teachers in Illinois. The second section contains the Committee's recommendations on the preparation of such teachers. The third section contains recommendations on the kind of state institution which should participate in this program of college teacher preparation.

How Many Additional Teachers Will Be Needed?

Junior colleges are expected to be the fastest-growing part of the entire educational system. According to projections shown in Appendix B, we will need over 10,000 teachers of liberal arts and general education subjects over the next twelve years to staff the faculties of Illinois' junior colleges. All programs proposed and started within the next decade will graduate teachers who will be quickly placed in the junior college system. The Committee anticipates that the supply will not meet the demand. Thus, the need for junior college teachers is so great that we must move quickly to meet the problem of numbers by establishing high-quality programs of teacher preparation.

At present 88 per cent of full-time faculty members in Illinois' public junior colleges possess at least the master's degree, and 5 per cent possess the doctorate.[1] Of the persons newly employed in the junior colleges in the fall of 1967, over one third (34%) had previously worked in secondary schools, 15 per cent had transferred from other junior colleges, and 22 per cent had held appointments in senior colleges. Only 2 per cent had held appointments in elementary schools, and 11 per cent had come from business or industry. In the source used, the only categories which might indicate that a new appointee was a newly graduated student were "No previous employment" and "Other," which accounted for 8 per cent each.[2] We can speculate only on the extent to which these proportions would change upon the establishment of specific programs for junior college teacher preparation. Obviously, the development of such programs into an important, and even major, source would depend upon such factors as the acceptance of the graduates by the junior college, the number of potential students for the programs, and the adequacy of such resources as staff and facilities provided by the universities.

Recommendations on the Preparation of Junior College Teachers of Subjects in the Liberal Arts and Sciences

Current studies indicate that between 75 and 80 per cent of all students enrolled in junior colleges will be taking liberal arts or general education subjects. The Committee recognizes the serious problem of the articulation of the transfer student, but it believes that the solution must result from recurring discussions between professional staffs in the junior and senior colleges. The Committee believes the problem will be minimized and the quality of instruction improved as the junior college is assimilated into the mainstream of American higher education. The junior college must be distinct from the secondary school; it must become a collegiate institution in outlook and management.

[1] Ernest F. Anderson and James S. Spencer, *Reports of Selected Data and Characteristics, Illinois Public Junior Colleges, 1967-68*, 1968, p. 46.

[2] *Ibid.*, p. 52.

We see the junior college as a unique addition to our system of higher education, and we believe that programs for educating its teachers must enable it to engage and to retain students effectively. In the effort to ally junior colleges with the problems and expectations of higher education, we need to think of them as institutions having common goals; but there is, and will continue to be, wide variation among individual institutions. Colleges in different settings will have different ranges of problems. This is an obvious point, but the Committee stresses it to underline the need for flexibility in any program of teacher preparation. The master's degree in an academic subject represents a minimal but adequate preparation for teachers of subjects at the college first- and second-year levels. Therefore, the Committee believes that the possession of a traditional master's degree in an academic subject should be the minimum recommended for persons to teach academic subjects.

The junior college must not be limited to choosing its faculties from those who graduate from one particular kind of program. It must be free to select its faculties from a variety of acceptable programs. In no sense should there be a teacher certification requirement or its equivalent for the junior college teacher.

Teachers holding a master's degree should, of course, be encouraged to pursue further study, including taking course work toward the doctorate and obtaining the doctorate itself. Additional work of this kind could be recognized by an intermediate degree or certificate and could be rewarded by the junior college through a differential salary scale.

In confronting the problem of preparing junior college teachers of academic subjects, we must start where we are now; but we must also consider where we hope to be. Essentially, the problem involves the preparation of new teachers; but it also includes that of up-grading those now in service. The Committee recommends the following guidelines as common elements in all programs of preparation:

1. Although the quality of the preparation of junior college teachers of liberal arts subjects must be the same as that for teachers in other colleges and universities, programs of preparation should reflect the teaching needs of two-year colleges.

2. Programs concerned with the preparation of junior college faculty should be directed toward educating teachers, not researchers.

3. All programs should include substantial work in an academic discipline and in subjects allied to that discipline.

4. All programs should include supervised teaching experience as part of the degree program.

Preparation of Teachers at the Intermediate Level

The Committee believes that relying on the traditional master's degree programs for the junior college teacher is insufficient. As we have pointed out, the established programs combined will not satisfy the demand; and therefore new programs are required. Equally important, programs following the usual pattern often do not serve the specific needs of the junior college. The Committee therefore recommends new programs at the intermediate level designed especially for the preparation of junior college teachers of liberal arts and general education subjects with the following specifications:

1. The degree should be designated as the Master of Arts or Master of Science in College Teaching or Specialist in College Teaching. The new designation will identify the variety of specific programs subsumed under it, and it will also indicate the special purpose of the degree.

2. The program should have a core of subjects identified with recognized disciplines, i.e., English, biology, mathematics, etc., equivalent to or exceeding the academic standards of the Master of Arts or Master of Science. We emphasize this point in behalf of the junior college student, especially the transfer student, who must have this kind of knowledge to complete his last two years.

3. The program should include options outside of the basic disciplines. This will enable the prospective teacher to acquire a breadth of knowledge that will prepare him for teaching in an institution in which the degree of specialization is much less than it is in the universities.

4. The program should normally include a supervised teaching experience as a part of the academic program. We recommend that the teaching experience be obtained in the degree-granting institution and/or in cooperation with the junior college.

5. The program should include a seminar on the institutions of higher education with appropriate attention to the junior college. The point of this requirement is to acquaint the student with the nature of the institution in which he will work and more broadly with the nature of higher education in America.

6. The program should be considered terminal, in the sense that its successful completion qualifies the student to teach in the junior college. At the same time, the program should be such that students with a variety of educational backgrounds should be able to enter it. Finally, the program should be so designed that students, in their quest for self-improvement, can enter doctoral programs in the same area of study.

The new degree will normally take two years of graduate study, but the Committee believes that programming should be flexible enough to permit capable students to complete the degree in a shorter period of time.

The Committee encountered a plethora of titles used throughout the U. S., a few of which are widely accepted by the academic profession. The Committee screened these titles carefully and finally decided that two designations (master's and specialist degrees in college teaching) would best represent the divergent philosophies. The Committee's dual designation represents an attempt to bring some order in a very fluid situation. As advantageous as a single title might be, the Committee believes it can not arrive at the ultimate or single designation at this time.

The Committee believes that the master's degree in college teaching will probably be part of a two-step stage toward the doctoral degree. The specialist degree is more apt to be terminal and to be taken by those already having their master's degree. Future practice will best determine the meaning and uses of these two degree titles.

Over a period of time the academic community may accept or reject both of these; it is possible that a new and as yet untried designation may emerge. Therefore, the Committee believes that the titling of the intermediate degree should be reexamined in a three- to five-year period to ascertain whether consolidation or change should be made.

Programs at the Doctoral Level

What follows is predicated on the assumption that the junior college system in Illinois is in its nascent stage and that certain long-range goals for the faculties of these institutions are in order. We assume, in other words, that the academic preparation of teachers short of the doctorate is acceptable, but not forever. The Committee believes it necessary, therefore, to establish an academic goal for teacher preparation that will insure a supply of teachers of the highest competence. Like the senior institutions, the junior college will always appoint persons of the best qualifications irrespective of the degrees they possess.

We are therefore recommending authorization to qualified state institutions (described in the third section of this report) to develop doctoral programs for the junior college teacher, programs that should also be suitable to teachers for four-year undergraduate colleges. At the outset, we stress that the new doctoral programs must differ in character but not in quality from the traditional doctorates. We also stress the point that there must be a substantive difference between the new doctoral programs and those which now exist. To state it positively, the design of the new program must mirror the requirements of a "practitioner" in the same way that medical or dental education reflects professional rather than research requirements.

Recommendations on the Curriculum of the New Doctorate

1. All programs should be designed to enable the full-time student to finish in three and not more than four years after he has obtained his baccalaureate.

2. The substance of the new doctorate should include major subject-matter areas, but it should also include courses related to the functions of college teaching. These are an integral part of

the junior college environment and vitally important in the light of the legal requirement to admit students of widely varying backgrounds and pre-college achievement. We must make every effort to enable students of such widely differing competencies to begin and to finish the educational programs best suited to them.

3. The program of preparation should emphasize the interrelatedness of subject matter, and the curriculum should be designed to insure this emphasis.

4. The program should include an investigation that could concentrate, as an example, on the problem of education in specific kinds of environment, i.e., rural, urban, social and economic, etc. This investigation could well concentrate on the problems teachers face in the junior college and, for that matter, on the almost kaleidoscopic problems the institution itself faces.

5. The program should normally include a supervised teaching experience, and this may be best accomplished by a term or a semester of teaching in either the junior or the senior institution. Interinstitutional arrangements for this should be flexible, so that the student is not unduly restricted in his choices, but also formal enough to maintain adequate supervision of the student.

6. The program should emphasize the student's competence in subject areas.

We urge that new programs be imaginatively designed and that they employ the most recent research and technologies. To accomplish these ends, we also urge that the energies of the appropriate members of the *entire* faculty be used in program design.

There must be a degree of unity among all such programs, but they should be by no means uniform. Each institution should make careful use of its distinctions and strengths, and in every respect the autonomy of the institutions should be respected and preserved. The final criterion of this or any other program is its quality, and this is an element only the institution itself can assure.

Title of the Degree

Titles are significant to those who earn them. A title less than the doctorate probably would fail to attract highly qualified students and would fail to show that this program is different, not inferior, to other kinds of doctorates. It is preferable, we believe, to use a title that will cover all areas of concentration and to avoid Doctor of Biology, Doctor of English, Doctor of Psychology, etc. Of course, the new title must avoid competition with established doctoral titles also. In the light of these considerations, we recommend the use of the title "Doctor of Arts." As used in the title, the word *arts* suggests that the degree emphasizes the practice of a profession.

Will the New Degree Be Viable?

The question is usually put this way: Would you hire one? The question is germane not only to the colleges in Illinois but also to colleges everywhere in the country. Of course, there is no certain answer to the question. Factors influencing the answer include, first of all, the quality and the effectiveness of the students who obtain such a degree. Second, this program emphasizes teaching and the problems of teaching in a specific kind of emerging institution. We assume that the junior colleges, whose representatives have had a role in the design of these guidelines, will welcome graduates of this program.

The New Doctoral Program in Senior Institutions

The Committee believes that graduates with a Doctor of Arts degree would also serve particularly well in four-year liberal arts colleges and in university programs having as their primary objective a liberal education rather than preparation for graduate studies or a research career. Indeed, because the proposed program specifically directs itself toward this end, it should serve the teaching function better than traditional programs.

Institutions That Should Offer Programs Preparing Junior College Teachers of Liberal Arts and General Education Subjects

The Committee recommends that the following conditions should apply in determining whether a specific institution should participate in preparing junior college teachers:

1. Institutions should have a demonstrated commitment to the problems of the junior colleges and undergraduate teaching and the particular demands and expectations related to them. More specifically, institutional commitment may be demonstrated by allocation of resources and staff to these programs and by evidence of institutional service to the junior colleges.

2. Junior and senior colleges should develop viable relationships at all appropriate levels. Probably these relationships will develop among institutions in geographical proximity to each other, but geography should not be the determining factor. The Committee believes, for example, that senior colleges can serve the junior colleges by assisting them in developing intern-placement programs and by encouraging their students to become junior college teachers.

3. Decisions on permitting particular departments or divisions of an institution to offer any of the degree programs recommended in this report would be a matter for that institution to decide, under the guiding policies and practices of that institution.

4. Only those programs that demonstrate well-coordinated planning between faculties in the academic and teacher-preparation areas should be approved.

The Committee has not ignored the matter of identifying by name institutions that could participate in these programs. We have, however, decided against such identification. The need for teachers is so great that every qualified state institution should participate in one or more types of programs. The criteria outlined previously indicate what the Committee believes most relevant for determining institutional participation. Accordingly, each university should be encouraged to perform its special role.

PART II

PREPARATION OF JUNIOR COLLEGE TEACHERS OF TECHNICAL SUBJECTS

This part is divided into four sections. The first section is a statement on occupational education and the junior college. The second section states the need for junior college teachers of occupational subjects. The third section contains the Committee's recommendations on the preparation of junior college teachers of technical subjects. The fourth section contains recommendations on the state institutions that should participate in the programs of teacher preparation.

Occupational Education and the Junior College

A familiar explanation of the shortage of vocational-technical programs is that there is a scarcity of vocational-technical teachers in the junior colleges of Illinois. The Committee has come to question this explanation and to suggest that there is a much more fundamental cause for this condition, namely, the historically inferior position of vocational-technical education within the system of public education. It is difficult to imagine, for example, any public high school in which such programs and the students enrolled in them are considered the equal of the other "academic" programs.

While it is still too early to tell, the state's junior colleges could fall into the same pattern, a result which would have the effect of perpetuating rather than ameliorating present practices. The aspirations of recent high school graduates have not thus far indicated an impressive need on their part for vocational-technical education in the junior colleges. Moreover, some parents, faculty, and administrators regard such programs as a second-class part of these institutions. If the titles preferred for some of the two-year colleges are an indication, many of the same people would like to convert them into four-year colleges. With notable exceptions, there is some question that many junior colleges can or will, either by commitment or by resources, develop into comprehensive institutions with strong occupational education programs.

On their side, the state universities have shown minimal interest on occupational teacher-education programs, so that they have not been sources of the numbers of teachers we will need for occupational education in the junior colleges and elsewhere. The universities are not geared to produce the teachers; but if they were, where would the teachers find junior colleges with sufficient resources to provide both the complex and the varied facilities required by a sophisticated program of vocational-technical education? In any case, it is clear that the problems posed by this kind of education for the State of Illinois lie beyond the charge of the Committee: to prepare recommendations for college teacher preparation.

Given the parameters of the present situation, the Committee makes the following recommendations that are confined chiefly to the preparation of technical teachers. These recommendations, it is hoped, will help to attract into the teaching profession technically competent people and also to expand educational opportunities for those already teaching.

How Many Teachers Will Be Needed?

For the statistical data on teacher need, we refer the reader to the appendices of this report. In summary, the figures show that between the years 1969 and 1980, Illinois will need 6,360 *additional* teachers of technical subjects. This figure excludes those who will be needed to replace those presently in service, but it includes those *currently* needed to staff programs in technical education.

In 1968, it was estimated that 25 per cent of the FTE enrollment in the junior colleges was in

technical-education subjects. By 1980, it is predicted the figure will be 40 per cent. In this same time span, the net number of FTE students in technical programs may grow from 12,589 to 68,986.

One can conclude from these projections that there is a substantial need and that the major problem will be finding qualified people, from any source, to staff programs that will attract students.

Recommendations on the Preparation of Junior College Teachers of Technical Subjects

First of all, we wish to reemphasize the fact that although junior colleges have common goals, there is and should be a wide variation among individual institutions. Hence, there is a need for flexible programming in technical teacher education. *In no sense should there be anything akin to a certification requirement. The junior colleges must remain free to select faculty from all the sources open to a collegiate institution.* With these considerations in mind, the Committee is concerned primarily with the contributions the state universities can make toward meeting the demand for technical teachers.

The Committee understands that in some areas of occupational education, university training may be desirable but not necessary. The traditional degree models applied to technical teachers may be misleading and, in some instances, completely inappropriate. For this reason, the Committee encourages junior colleges to develop standards of competence other than degrees for the recognition of technical teachers.

At the same time, universities are encouraged to develop degree programs at both the baccalaureate and advanced-degree levels to meet the need for technical teachers. In any case, the teacher of occupational education should be recognized on the basis of his competence rather than on degrees he may or may not possess.

Occupational teachers ought to be encouraged to take academic work, and the universities are urged to make it available. This work will include the usual course work put together in specific degree programs, but the Committee also urges the universities to design nondegree programs for improving both the substantive knowledge of the student and the teaching skill of technical men who become teachers. As we have said, persons will enter college teaching from a variety of sources, some of them with little or no knowledge of the teaching and learning process. It is here that the universities can make a significant contribution, in both their on-campus and their off-campus operations.

Vocational Education

The recommendations of this Committee are limited primarily to teachers for technical programs. Before making recommendations, the Committee wants to differentiate vocational from technical education on the basis of a study published by the Bureau of Educational Research, College of Education, University of Illinois, entitled *Vocational and Technical Education in Illinois/Tomorrow's Challenge* (1960). This document (p. 28) defines vocational education as follows:

> Vocational education, in the broad sense, is formal instruction which prepares individuals for initial entrance into, and upgrading within, a socially approved occupation, or group of related occupations, at the high school and post-high school levels of education.

Later, this same study (p. 28) arbitrarily defines vocational education as "formal occupational instruction at the high school level."

We assume the vocational education in the junior colleges will be, by and large, a series of courses of *one academic year or less*, designed to train students in vocational skills. Because such skills are comparatively elementary and cover such a wide range of specialties, there is no educational institution or combination of them that can provide the teachers for them. Some will come from universities; but, in fact, they will come from whatever sources there are of available and trained manpower. The Committee believes that while the state universities can assist the junior colleges with this manpower requirement, they are not prepared to produce substantial numbers of vocational teachers.

Technical Education

The primary concern of this part of our report is the preparation of teachers of technical education. The University of Illinois report, cited above, defines technical education:

> . . . . in terms of the composition of skills which the respective occupations require of the worker and the length of time necessary for preparation beyond high school. In most cases, there is an essential element of manipulative skill, but the preponderant component is cognitive knowledge.
>
> There are two characteristics which distinguish technical from professional education. The former extends from one to three years beyond high school, with the vast majority of curricula requiring two years for completion. (pp. 47-48)

From this definition, two characteristics of technical education emerge that make it an area in which the universities can make a major contribution. One characteristic is the average two-year duration of the program, an arbitrary cut off which minimizes the very large and extremely varied area of vocational education. The second characteristic is substantive, that the major component of technical education is cognitive or more concerned with theory and principles than with simply manipulative skills.

Thus, to prepare technical teachers primarily for two-year programs in the junior colleges, the Committee makes the following recommendations:

1. Curriculum

   a. All programs of technical teacher education should be tailored to the student's needs and goals.

   b. All programs should include work experience in or directly related to the field of teaching, and the student should be given academic credit for it.

   c. All programs should have a component in general studies or liberal arts and sciences subjects, but this component should not be so formidable as to become a constraint to the student's objectives.

   d. All programs should require a teaching experience or an internship of the student.

   e. All programs should require a course in the history and philosopy of the junior college in the context of higher education. The course should be designed for all students teaching or intending to teach in the junior college.

2. Junior Colleges

   a. The junior colleges should grant periodic leaves to technical faculty for service programs in business or industry.

   b. The junior colleges should be encouraged to find ways to develop opportunities for their faculties for continuing education and professional development on the same basis as for the faculties of senior institutions.

3. Universities

   Institutions with the resources should be encouraged to expand their programs, degree and non-degree, for technical teachers. Planning for such programs could include the following:

   a. Articulation of the curriculum at the proper level with that of the junior college, for it is expected that its graduates will be a major source of technical teachers.

   b. Provision for off-campus instruction, particularly workshops, through the university extension system and in off-campus residence centers. If programs of this nature are available

and flexible, they will encourage technically competent people to become teachers and to improve themselves as teachers.

Institutions That Should Offer Programs Preparing Junior College Teachers of Technical Subjects

Earlier, it was stated that, with certain notable exceptions, the state universities do not have substantial programs in many fields of technical teacher education. This being true, it is logical to urge all institutions to mount additional and/or expanded programs as their resources permit.

At the same time, they must recognize that such programs are not to be merely extensions of teacher-training curricula for the secondary schools. New programming must have its own integrity in this specialized field of higher education.

Institutions entering into these programs should be encouraged to seek creative relationships with business and industry in an effort to insure in-depth practical experience in the field. Models of cooperative education and proficiency testing should be incorporated into such programs.

On an experimental basis, the Illinois Board of Higher Education might designate certain institutions to explore the feasibility of a contractual arrangement between them and selected business and industrial firms, the principal aim of this arrangement being that such firms would train students in specific technical competencies in a joint program with the universities, which would grant academic credit for such training and also educate the student in the traditional skills of a teacher.

All university-sponsored programs should have requisite state and federal support. Indeed, the state must consider providing resources as incentive to the university to establish programs.

The Committee believes, however, that both state and federal support for the training of technical teachers should be allocated outside of the present certification requirements for vocational secondary education. The Committee has two major reasons for taking this position:

1. Both the senior and junior institutions have the capacity to assure the quality of occupational education programs. They do not have certification requirements for teachers of other subjects, and there need be none for these.

2. It is imperative that the junior college be regarded as a collegiate institution. This point is made elsewhere in this report, and it is made again to emphasize the freedom of the junior college to appoint qualified faculty from any legitimate source without forfeiting available financial support for occupation education.

APPENDIX A

Procedural note: The projected estimates of the number of teachers presented in Appendices B and C are based on (1) enrollment estimates from two different sources of nonpublic junior college enrollments from Table I, p. 6, of *Junior College Personnel Needs in Illinois*, committee of the Illinois Joint Council on Higher Education, January, 1968, and Table III, *Report of the Second Enrollment Projections Study*, Junior College Board, May, 1968, and (2) projected teacher-student ratios as given in *Junior College Personnel Needs in Illinois*, pp. 8-11. The procedures and assumptions used were as follows:

1. Using the actual FTE enrollment figures in Table III of the *Enrollment Projections Committee Report* for the years 1965-1967, the average increase of 17.8% is applied to the years 1968-1973. This rate is used because this period is expected to be similar to the 1965-1967 period in that new colleges will be built at about the same rate, and the age cohort will increase at a similar rapid rate.[1] A straight line projection of 13,909 FTE student increase per year is applied from 1973 through the 1978 projected enrollment of 216,954 (as given in Table III of the *Enrollment Projection Committee Report*) since by 1973 it is expected that all or nearly all of the state will be included in a junior college district with existing and adequate physical plants, and the age cohort will increase less rapidly.

2. To the estimated public junior college enrollments as derived through the procedure described in 1 above were added the estimates of FTE student enrollment in nonpublic colleges as given in Table I of *Junior College Personnel Needs in Illinois.* These projections are presented in Appendix C.

3. The FTE enrollments were divided into liberal arts and general education programs and occupational programs by proportions based on public junior college experience from 1965 through 1967 and projected at a rate of increase to 1980 based on proposals for program balance for the junior colleges.

4. Of the FTE student enrollment figures allocated to occupational programs, about one third of the course work is normally taken in liberal arts courses. In order to derive accurate estimates of the number of liberal arts teachers needed, it was necessary to add these FTE figures to the enrollment figures for liberal arts programs.

5. To the resultant figures for each year for both liberal arts and occupational programs were applied the teacher-student ratios of 52:1,000 and 81:1,000, respectively, as given in *Junior College Personnel Needs*, pp. 8-11, in order to derive the estimates in Appendix B.

[1] These estimates are smaller for this period than those given in Table III of the *Report of the Enrollment Projections Committee* because the latter represent enrollments that would be possible if capital funds were provided and facilities available for all students who wished to enroll, i.e., they overstate probable actual enrollments for this period since they are for the purpose of assessing need for capital fund expenditures—not the numbers of students who will actually be accommodated.

APPENDIX B

ESTIMATED NUMBER OF ADDITIONAL TEACHERS NEEDED IN ILLINOIS JUNIOR COLLEGES 1968 - 1980

	Numbers needed to meet Enrollment Growth		Numbers needed for Replacement at 5% Rate per year		TOTAL		
Year	Liberal Arts and General Education Programs	Occupational Programs	Liberal Arts and General Education Programs 5%	Occupational Programs 5%	Liberal Arts and General Education Programs Total	Occupational Programs Total	Grand Total
1969	440	251	162	51	602	302	904
1970	514	310	184	63	698	373	1,071
1971	606	385	210	79	816	464	1,280
1972	740	395	240	98	980	493	1,473
1973	869	479	277	118	1,146	597	1,743
1974	513	347	321	142	834	489	1,323
1975	502	362	346	159	848	521	1,369
1976	499	381	371	177	870	558	1,428
1977	479	391	396	196	875	587	1,462
1978	475	410	420	216	895	626	1,521
1979	459	421	444	236	903	657	1,560
1980	448	436	467	257	915	693	1,608
Total	6,544	4,568	3,838	2,606	10,382	6,360	16,742

APPENDIX C

JUNIOR COLLEGE FTE ENROLLMENT PROJECTIONS

Year	(1) Total FTE Enrollment [Public and Nonpublic)	(2) Percentage Estimated in Occupational Programs	(3) FTE Enrollment in Occupational Programs	(4) Number of FTE Student Credit Hours of (3) in Liberal Arts Course[.33 of (3)]	(5)[a] Net Number of FTE Student Credit Hours in Occupational Programs [(3)-(4)]	(6)[b] Net Number of FTE Student Credit Hours in Liberal Arts Programs [(1)-(5)]
1968	75,160	25	18,790	6,201	12,589	62,571
1969	86,727	27	23,416	7,727	15,689	71,038
1970	100,430	29	29,125	9,611	19,514	80,916
1971	116,838	31	36,220	11,953	24,267	92,571
1972	135,968	32	43,510	14,358	29,152	106,816
1973	158,583	33	52,332	17,270	35,062	123,521
1974	172,737	34	58,731	19,381	39,350	133,337
1975	186,852	35	65,398	21,581	43,817	143,035
1976	201,146	36	72,413	23,896	48,517	152,629
1977	215,196	37	79,623	26,276	53,347	161,849
1978	229,387	38	87,167	28,765	58,402	170,985
1979	243,407	39	94,929	31,327	63,602	179,805
1980	257,411	40	102,964	33,978	68,986	188,425

[a] Number of teachers needed for occupational programs based on those figures at the ratio of 81 teachers per 1,000 FTE students.

[b] Number of teachers needed for liberal arts and general education programs based on these figures at the ratio of 52 teachers per 1,000 FTE students.